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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,041	07/08/2004	Tetsuya Machida	TIP-04-1168	3180

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IP GROUP OF DLA PIPER US LLP  
ONE LIBERTY PLACE  
1650 MARKET ST, SUITE 4900  
PHILADELPHIA, PA 19103

EXAMINER

CHEN, VIVIAN

ART UNIT PAPER NUMBER

1773

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/501,041

Applicant(s)

MACHIDA ET AL.

Examiner

Vivian Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 25-50 is/are pending in the application.
- 4a) Of the above claim(s) 30 and (31-32,35,36,37-50)/30 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-27 and (28-29, 31-33, 35, 37-50)/(26-27) is/are allowed.
- 6) ☒ Claim(s) (28-29, 31-32,35, 37, 39, 40-42, 44, 46-50)/25 is/are rejected.
- 7) ☒ Claim(s) (33, 38, 43, 45)/25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/8/2004</u> .  | 6) <input type="checkbox"/> Other: _____                          |

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## DETAILED ACTION

1. Claims 1-24 have been cancelled by Applicant.

### *Election/Restrictions*

2. Applicant's election without traverse of claims 25-27 and claims 28-29, 31-33, 35, 37-50 (as dependent on claim 25-27 in the reply filed on 8/21/2006 is acknowledged.
3. Claims 30 and claims 31-32, 34, 36, 37, 50 (as dependent on claim 30) are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 8/21/2006.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 25 and claims 28-29, 31-32, 37, 39, 41-42, 46-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over: HORIE ET AL (US 4,421, 887) or KONAGAYA ET AL (US 5,434,000);

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in view of SCHMIDT ET AL (US 2002/0022099);

and in view of ULLMANN'S ENCYCLOPEDIA OF INDUSTRIAL CHEMISTRY  
(ULLMANN'S).

HORIE ET AL discloses a biaxially oriented polyester film containing transition metal oxide particles, wherein the particles have a typical size of 0.1-1 microns in typical amounts of 0.8 parts by weight or less. The film has a typical thickness of 15 microns and is suitable for magnetic recording media and other applications. (line 20-35, col. 2; line 34-66, col. 4; line 1-15, col. 5; Example 1)

KONAGAYA ET AL discloses a biaxially oriented polyester film containing transition metal oxide particles, wherein the particles have a typical primary size of less than 0.1 microns in typical amounts of 100-20000 ppm, with coarse agglomerates being undesirable. The film has a typical thickness of 15 microns and is suitable for magnetic recording media. (line 13-22, col. 2; column 3; Example 1)

SCHMIDT ET AL discloses that it is well known in the art that a polymer in crystallized form typically has a higher melting point than when in amorphous form. (paragraph 87).

ULLMANN'S discloses that it is well known in the art to use polyester films in numerous applications in addition to magnetic recording media, such as capacitors, transfer films, etc. (section 7)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the biaxially oriented films of HORIE ET AL or KONAGAYA ET AL in known polyester film applications (e.g., cards, electronic devices, transfer films, etc.) in order to produce useful products with superior film handling properties, abrasion resistance, and

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other desirable physical properties. Since a polymer in crystallized form typically has a higher melting point than when in amorphous form, the Examiner has reason to believe that the biaxially oriented films of HORIE ET AL or KONAGAYA ET AL would have a higher melting point in a first run because of their crystalline nature (caused during conventional orientation and heat-setting processes) compared to a second run when the film or polymer is in a relatively more amorphous state due to the prior melting, therefore the Examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald et al.*, 205 USPQ 594. It would have been obvious to minimize the amounts of large aggregated particles in the film (claims 32, 42) in order to minimize physical defects.

3. Claims 35, 40, 44 (as dependent on claims 25) are rejected under 35 U.S.C. 103(a) as being unpatentable over: HORIE ET AL (US 4,421, 887) or KONAGAYA ET AL (US 5,434,000), in view of SCHMIDT ET AL (US 2002/0022099); and in view of ULLMANN'S ENCYCLOPEDIA OF INDUSTRIAL CHEMISTRY (ULLMANN'S), as applied to claim 25; and further in view of TSUNEKAWA ET AL (US 6,420,011).

TSUNEKAWA ET AL discloses that it is desirable to orient polyester films (e.g., polyethylene terephthalate) wherein the films have a planar orientation of 0.03-0.19, a heat shrinkage of 1% or less at 100 C, and a total Young's modulus in both the machine and transverse directions of 8-25 GPa, in order to obtain films with desirable physical properties and dimensional stability useful for numerous applications. (line 1-35, col. 1; line 15-20, col. 5; line 50, col. 6 to line 65, col. 7)

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to orient the films of HORIE ET AL or KONAGAYA ET AL to obtain film parameters comparable to those disclosed in TSUNEKAWA ET AL in order to obtain films with desirable physical characteristics.

***Allowable Subject Matter***

4. Claims 26-27 and claims 28-29, 31-33, 35, 37-50 (as dependent on claims 26-27) are allowable over the prior art of record.
5. Claims 33, 38, 43, 45 (as dependent on claim 25) are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter:  
  
The prior art of record fails to disclose or teach biaxially oriented polymer films containing transition metal oxide particles: (1) having the recited difference in  $T_m$  between a first and second measurement (claims 26-27); (2) polynaphthalate films with the recited plane orientation factor (claim 33); (3) wherein the oxide particles are copper oxide (claim 38); (4) wherein the film has the recited storage modulus (claim 43); or (5) wherein the film has the recited heat shrinkage at 150 C (claim 45).

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*Conclusion*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (571) 272-1506. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

The General Information telephone number for Technology Center 1700 is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 9, 2006



Vivian Chen  
Primary Examiner  
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